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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,537	07/02/2001	Shimman Patel	000270	7551

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Qualcomm Incorporated
Patents Department
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EXAMINER	
KIM, KEVIN	

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/898,537	Applicant(s) PATEL ET AL.	
	Examiner Kevin Y. Kim	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-20,22-28 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *17-20,22-28 and 31-40* is/are allowed.

6)☒ Claim(s) *1,2,8,10 and 11* is/are rejected.

7)☒ Claim(s) *3-7 and 12-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant amended claim 1 include the subject matter of claim 9, which was indicated allowable in the previous Office action. However, upon a review it has been found that the subject matter of claim 9 is also disclosed by the Yau et al patent as set forth below. Additionally, claims 8,10 and 11 are found to have been obvious in view of prior art as set forth below.

Claim Rejections – 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,2,8,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yau et al (US 6,418,162) in view of Signell et al (US 6,032,166).

Claims 1,2 and 10.

Referring to Fig.1, Yau et al describes a traditional frequency spectrum, measurement. The spectrum of an input signal is measured by linearly or stepping through a desired frequency range, bandpass filtering the signal and measuring the signal power. See col.1, lines 5-36. Yau et al further describes measuring the signal power after the bandpass filter. Col. 1, lines 12-13 indicating "a magnitude of an output of the filter" is obtained to provide the power measure. Further it is well established that "squaring an absolute value of the filter output" is performed to derive the power measure. Though not explained in detail, it can be seen that a frequency is

selected and a narrow bandpass filter passes the selected frequency while rejecting other frequencies, thus allowing the measurement of the signal power at the selected frequency. It can be inferred that a bank of narrow bandpass filters or a bandpass filter with a variable passband is required to pass each of the selected frequencies. Thus process is repeated until selected frequencies in a desired frequency range are exhausted. It goes without saying that frequencies whose power are measured over a predetermined level will be judged as the spectrum/bandwidth of the signal. Thus, this description of the traditional frequency spectrum measurement of a signal discloses the claimed steps of "obtaining a power measure ....of the received signal," and the step of "estimating a bandwidth of the received signal based on the power measure." The claim additionally calls for the steps of "receiving information defining a generating value of a filter" and "generating a plurality of coefficients of the filter from the generating filter." Referring to Fig. 1, Signell et al discloses a digital bandpass filter with a variable passband (16), where the programming of the passband is obtained by varying the filter coefficients. See col. 1, lines 24-28. In other words, upon receiving a control signal "defining a generating value of a filter," i.e., a specific frequency, the digital bandpass filter generates coefficients for the filter such that the specific frequency would be passed therethrough. The digital bandpass filter with a variable passband is described to allow utilization of the easy programmability of discrete-time filters. See col. 1, lines 26-41. Thus, it would have been obvious to one skilled in the art at the time the invention was made to use the digital bandpass filter with a variable passband, taught by Signell et al, as a bandpass filter of a spectrum measurement device described by Yau et al such that the digital bandpass filter generates coefficients in response to a selected frequency, the power of the bandpassed signal is measured to estimate the bandwidth of a signal.

Claim 8.

In the case that a bandpass filter with a variable passband is used, the plurality of coefficients is generated at runtime.

Claim 11.

Though not described, the use of an automatic gain control in a receiver is well known in the art to compensate for the signal level fluctuation during transmission, and thus would have been obviously used in the receiver described in the Yau et al patent for compensating for the signal level fluctuation during transmission

Allowable Subject Matter

4. Claims 17-20,22-28,31-40 are allowed.

5. Claims 3-7,12-16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KEVIN KIM
PATENT EXAMINER

/K. , Kim